

REMARKS

This Amendment accompanies a Request for Continued Examination and is responsive to the Office Action of March 17, 2010.

STATUS OF CLAIMS

Claims 1-17, 33, and 35-38 have been previously cancelled; Claims 20, 23, and 24, are cancelled by this amendment; and new Claims 40 and 41 have been added. Accordingly, Claims 18, 19, 21, 24-32, 34, 35, and 39-41 are pending in the application.

AMENDMENT OF CLAIMS

Claim 18 has been amended to recite that the tubular energy transmitter includes an acoustic transmitter pipe; that the aerosol tube is positioned around a portion of the acoustic transmitter pipe; and that the energy source is configured for transmission of energy to a focal region of the liquid proximate said one end of the acoustic transmitter pipe. Support for these amendments is found in the specification, for example, and without limitation, at Page 8, lines 17-22 and 24-26, and in the drawings.

Claim 24 has been amended to recite that an internal diameter of the aerosol tube is greater than an outer diameter of the acoustic transmitter pipe at the opposite end of the acoustic transmitter pipe. Support for this

amendment is found in the drawings, for example, and without limitation, Fig. 2.

Claims 21, 25-27, 34, 35 and 39 have been amended in conformity with the language of amended Claim 18 from which they depend, directly or indirectly.

Claims 24, 25, 28 and 31 have been amended to correct dependencies.

Claim 29 has been amended to recite that the expansion chamber is adapted to return non-nebulized liquid to the container via a drainage pipe. Support for this amendment is found in the specification for example, and without limitation, at page 12, lines 1-3.

DRAWINGS

The drawings were objected to under 37 C.F.R. § 1.83(a) because they fail to show the features described at page 6, line 14 - page 7, line 2, and page 12, line 4 - page 18, line 11, of the specification.

Applicant has amended the specification to remove the text at page 6, line 14 - page 7, line 2, and page 12, line 4 - page 18, line 11, which was directed to the cancelled Figs. 5-11. Furthermore, Applicant has submitted a replacement page of drawings containing figures of better quality.

It is believed that such amendments remove the basis for the objection to the drawings.

CLAIM REJECTIONS - 35 U.S.C. § 112

Claims 18, 19, 21-32, 34, 35 and 39 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention, because the metes and bounds of what constitutes "an aerosol tube positioned **about at least a** portion of the tubular energy transmitter" are unclear.

Applicant believes that the amendment of Claim 18 to recite that the aerosol tube is positioned around a portion of the tubular energy transmitter has removed the basis for the rejection of Claims 18, 19, 21-32, 34, 35 and 39 under 35 U.S.C. § 112, second paragraph, and withdrawal of the rejection is respectfully requested.

CLAIM REJECTIONS - 35 U.S.C. § 103

Regarding Paragraph 7 of the Office Action:

Claims 18, 19, 21-32, 34, 35 and 39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Khmelev, et al., RU 2070062) (based on an English language translation

of the reference), and further in view of Avrahami (US 4,961,885).

Reconsideration of the rejection in view of the above amendments and the following remarks is respectfully requested.

The primary reference, Khmelev, discloses an ultrasonic inhaler wherein a fluid to be nebulized is irradiated with ultrasonic radiation directed to a focal point within the liquid to be nebulized. In its discussion of the disclosure of Khmelev, the Office asserts that Khmelev discloses a tubular energy transmitter 17 and an aerosol tube 18 positioned about at least a portion of the tubular energy transmitter 17. However, respectfully, in reviewing the disclosures of Khmelev (as set forth in the translation courteously supplied by the Office) Applicant does not see any such characterization of elements 17 and 18.

In particular, Khmelev discloses a sleeve 17 which is fastened in cantilever fashion to the inside of technological cover 16 and fits coaxially into spray chamber 18 (RU 2070006 translation, page 5, lines 19-20). Respectfully, Applicant does not see any disclosure in the Khmelev reference that sleeve 17 transmits any ultrasonic energy or is capable of transmitting ultrasonic energy. Accordingly, there appears to be no basis in the disclosure

of Khmelev for equating Khmelev's sleeve 17 with Applicant's tubular energy transmitter including an ultrasonic transmission pipe (e.g., (34) in Fig. 2), as recited in amended Claim 18.

Furthermore, the Office asserts that Khmelev's aerosol tube 18 is positioned about at least a portion of the tubular energy transmitter 17. In order to clarify the distinction between the structure of Khmelev's nebulizer and Applicant's claimed apparatus, Claim 18 has been amended to recite that Applicant's aerosol tube (e.g., aerosol tube 18 in Fig. 2) is positioned around a portion of the acoustic transmitter pipe (34 in Fig. 2). To the contrary, the drawing of the Khmelev reference shows that a portion of output sleeve 18 (translation, page 5, line 22) is positioned inside a portion of sleeve 17, a clear structural difference.

In view of the above amendments and discussion, Applicant respectfully submits that amended Claim 18 does not recite the elements identified by the Office in the disclosures of the Khmelev reference. Respectfully, the primary reference lacks certain of the elements recited in Claim 18.

The Office recognizes that the Khmelev reference lacks at least the claimed feature that the tubular energy transmitter is immersed in the fluid to be nebulized.

In order to supply Khmelev's perceived deficiency, the Office cites Avrahami (US 4,961,885) for its teaching of an ultrasonic nebulizer having a container for the liquid to be nebulized and a liquid supply tube 20 which is immersed in the liquid in the container (Office Action, page 4, lines 16-18). However the disclosures of Avrahami do not remedy the deficiencies of the primary reference.

Avrahami discloses an ultrasonic nebulizer in which fluid to be nebulized is fed by pressure of electrolytically generated gas from a reservoir through a supply tube 20 to the vicinity of an ultrasonic nebulizer nozzle 18. The Office proceeds to assert (Office Action, page 4, line 19 - page 5, line2) that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Khmelev's sieve 17 to be submerged in the liquid to be nebulized in order to form a feed tube to deliver liquid to the focal point (20 of Khmelev), thereby eliminating the need for a separate liquid-containing reservoir and container. However, any location of a submerged feed tube that delivers liquid to be nebulized to the nebulizer focal point 20 of Khmelev's apparatus would

require such a focal point to be at the delivery point, i.e., at the outlet, or top, of such a delivery tube (as in Avrahami), whereas Khmelev's focal point is at the bottom of any such tube.

The Office's further alleged motivation for such a modification, i.e., to eliminate the need for a separate liquid container (Office Action, page 5, lines 1-2), requires a modification of Khmelev's nebulizer exactly contrary to the teaching of that reference. Khmelev's nebulizer employs an upper vessel, containing fluid to be nebulized, floating in a lower vessel that contains a compensating liquid (translation, page 6, lines 9-13). Khmelev teaches that this arrangement is intended to maintain the ultrasonic focal point generally near the surface of the liquid to be nebulized (translation, page 7, lines 5-9). Eliminating the separate reservoirs, as suggested by the Office, would thus destroy a major intended feature of the operation of Khmelev's apparatus. Applicant respectfully suggests that a skilled practitioner would not be motivated to make such a drastic rearrangement of Khmelev's nebulizer, a rearrangement that would not yield Applicant's nebulizer.

In view of the allowability of Claim 18, as explained above, Claims 19, 21, 24-32, 34, 35, and 39-41 are allowable

at least as dependent, directly or indirectly, from an allowable independent claim. Withdrawal of the rejection is respectfully requested

Regarding Paragraph 7 of the Office Action:

Claims 28, 29, and 39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Khmelev, et al., (RU 2070062) (based on the English language translation of the reference), in view of Avrahami (US 4,961,885), and further in view of Sheiman (WO 99/42145).

Initially, Applicant observes that Claims 28, 29, and 39 are patentable at least as dependent, directly or indirectly, from allowable Claim 18.

Furthermore, the deficiencies of the Khmelev and Avrahami references, and their combination, have been extensively discussed above.

The Office cites the Sheiman reference for its alleged disclosure of certain features of the embodiments of the invention claimed in Claims 28, 29, and 39. However, the disclosures of Sheiman do not remedy the deficiencies of Khmelev and Avrahami.

Accordingly, the rejection of Claims 28-29 and 39 under 35 U.S.C. § 103(a) is also not appropriate, and its withdrawal is respectfully requested.

In view of the above amendments and discussion,
Applicant respectfully submits that all claims in the
application are allowable.

Accordingly, withdrawal of the outstanding rejections
is requested, and an early Notice of Allowance is
respectfully solicited.

The Commissioner is hereby authorized to charge to
Deposit Account No. 50-1165 any fees under 37 C.F.R. §§
1.16 and 1.17 that may be required by this paper and to
credit any overpayment to that Account. If any extension of
time is required in connection with the filing of this paper
and has not been requested separately, such extension is
hereby requested.

Respectfully submitted,

Date: April 29, 2010

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